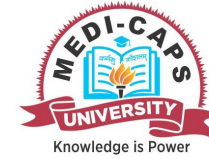


Total No. of Questions: 6

Total No. of Printed Pages:3

Enrollment No.....



Faculty of Science
End Sem (Odd) Examination Dec-2018
CA3EL07 Object Oriented Analysis & Design
Programme: BCA Branch/Specialisation: Computer Application

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1
- i. What is RUP stands for? 1
(a) Rapid User Process (b) Rational User Process
(c) Rational Unified Phase (d) Rational Unified Process.
 - ii. Phase that delivers software increment and assesses work products that are produced as end users work with software is 1
(a) Transition (b) Construction
(c) Elaboration (d) All of these
 - iii. Which of the following is a UML diagram? 1
(a) State chart diagram (b) Activity diagram
(c) Deployment diagram (d) All of these.
 - iv. Which of the following is an actor in use case? 1
(a) Persistent (b) Dynamic (c) Active (d) None of these
 - v. Which of the following operators denotes alternative interaction in sequence diagram? 1
(a) Par (b) Critical (c) Seq (d) None of these
 - vi. Using state chart diagram, one can monitor states of 1
(a) Object (b) Class
(c) Both (a) and (b) (d) None of these
 - vii. High Cohesion is measure of how focused responsibilities of 1
(a) Class (b) Object
(c) Both (a) and (b) (d) None of these
 - viii. Which of the following is a GOF pattern? 1
(a) Adapter (b) Attributes (c) Coupling (d) All of these

P.T.O.

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- ix. In a use case diagram of library management system, librarian, student, teacher, publisher can be represented **1**
(a) Actors (b) Classes (c) Use cases (d) None of these
- x. In a class diagram of ATM machine, customer has an account in Bank, which is used debit cards as withdrawal. Which relationship exists in classes: **1**
(a) Customer and account classes relating with associations.
(b) Customer and account classes relating with aggregations.
(c) Customer and account classes relating with composition.
(d) Customer and account classes relating with generalization.
- Q.2 i. What do you understand by complexity of software? Why softwares are inherently complex by nature? **4**
ii. Explain different phases of RUP. Draw proper diagram to support your answer. **6**
- OR iii. What is UML? Enlist different UML diagrams and their uses. Also write advantages of UML. **6**
- Q.3 i. Differentiate between aggregation and Composition. Give proper examples. **4**
ii. What are Class diagrams? How to draw class diagram? Explain using proper example. **6**
- OR iii. What is abstract and concrete class? How many types of relationship among classes? **6**
- Q.4 i. Discuss relationship between sequence and use case diagram. **4**
ii. What is meant by State Chart Diagrams? Discuss various symbols used in state chart diagram. **6**
- OR iii. Write short note on **6**
(a) Component Diagram (b) Deployment Diagram
- Q.5 i. What is GRASP? Write its advantages. Also explain Creator. **4**
ii. Discuss different GOF design patterns in detail. **6**

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- OR iii. Explain role of high cohesion and low coupling in good design. **6**
- Q.6 i. Draw use case diagram for ATM machine. **4**
ii. Draw class and object diagram for Library Management System. **6**
- OR iii. Draw Sequence diagram & Activity diagram for book issue and return for Library Management System. **6**

Marking Scheme
CA3EL07 Object Oriented Analysis & Design

| | | | | | | |
|-------|-------|---|-------------------------------|----------|----------|--|
| Q.1 | i. | What is RUP stands for? (d) Rational Unified Process. | | 1 | | |
| | ii. | Phase that delivers software increment and assesses work products that are produced as end users work with software is (a) Transition | | 1 | | |
| | iii. | Which of the following is a UML diagram? (d) All of these. | | 1 | | |
| | iv. | Which of the following is an actor in use case? (c) Active | | 1 | | |
| | v. | Which of the following operators denotes alternative interaction in sequence diagram? (d) None of these | | 1 | | |
| | vi. | Using state chart diagram, one can monitor states of (a) Object | | 1 | | |
| | vii. | High Cohesion is measure of how focused responsibilities of (b) Object | | 1 | | |
| | viii. | Which of the following is a GOF pattern? (a) Adapter | | 1 | | |
| | ix. | In a use case diagram of library management system, librarian, student, teacher, publisher can be represented (a) Actors | | 1 | | |
| | x. | In a class diagram of ATM machine, customer has an account in Bank, which is used debit cards as withdrawal. Which relationship exists in classes: (c) Customer and account classes relating with composition. | | 1 | | |
| Q.2 | i. | Complexity of software | 2 marks | 4 | | |
| | | Software's are inherently complex by nature | 2 marks | | | |
| | ii. | Phases of RUP Diagram | 4 Marks 2 marks | 6 | | |
| OR | iii. | UML UML diagrams and their uses Advantages of UML. | 2 marks 2 marks 2 marks | 6 | | |
| Q.3 | i. | Difference b/w aggregation and Composition | | | 4 | |
| | ii. | Class diagrams To draw class diagram Proper example. | 2 marks 2 marks 2 marks | | 6 | |
| OR | iii. | Abstract and concrete class Types of relationship among classes | 2 marks 4 marks | | 6 | |
| Q.4 | i. | Relationship between sequence and use case diagram. | | | 4 | |
| | ii. | State Chart Diagrams Symbols used in state chart diagram. | 2 marks 4 marks | | 6 | |
| OR | iii. | Write short note on (a) Component Diagram (b) Deployment Diagram | 3 marks 3 marks | | 6 | |
| Q.5 | i. | GRASP Its advantages Creator. | 1 mark 1 mark 2 marks | | 4 | |
| | ii. | GOF design patterns | | | 6 | |
| OR | iii. | Role of high cohesion Role of low coupling in good design. | 3 marks 3 marks | | 6 | |
| Q.6 | i. | Draw use case diagram for ATM machine. | | | 4 | |
| | ii. | Class diagram for Library Management System Object diagram for Library Management System. | 3 marks 3 marks | | 6 | |
| OR | iii. | Draw Sequence diagram Draw Activity diagram | 3 marks 3 marks | | 6 | |
| ***** | | | | | | |